Finance-Growth: Virtuous and Dis-Virtuous Cycles (VDCs) Theory and Empirical Evidence

Lauretta, Eliana; Binner, Jane; Kelly, Logan; Chaudhry, Sajid

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Eliana Lauretta[1], Jane Binner[2], Logan J. Kelly[3], Sajid Chaudhry[4]

Extended Abstract

Research Topic

The large debate on the finance-growth relationship around the world after seven years from 2007-2009 crisis is still actual. This because of the main difficulties to develop a notable and credible theoretical backbone of this relationship. When systematic issues triggered by the financial system disturbs the real economy the policy-makers and scholars find extremely difficult to understand the complexity of this relationship. Usually, political economy analysis has a monetarist or neoclassic footprint, such as that used in the European context. But the recent chain of events questions the validity and efficacy of this standard approach. The notion of "neutrality of the finance" (Modigliani-Miller, 1958) or "independence of the money making process from the making credit process" (Modigliani-Miller, 1958) (underlying the mainstream theory of the finance) distorts the correct interpretation of the economic dynamics. This constraints the identification of the problem and its solution.

The presence of "bank money" in the economy and in a financial system that is more advanced and characterized by financial innovation and speculation (not only banks), changes fundamentally the nature of the credit. Minksy (1982) defines the role of lenders as "endogenously destabilizing. The underpinning questions are: How the economic and the financial systems interact to affect economic growth? What is the role of the financial innovation in the money/credit process? It seems able to expand the endogenous money creation ability of the lenders. There is any endogenous role of the

[1] Birmingham Business School, Department of Finance, Elm House, University of Birmingham, Edgbaston, Birmingham - B15 2TT - UK; e-mail: e.lauretta@bham.ac.uk ; Phone: +44(0)1214143262 / +44 (0)7976653465 (please, contact the first author)

[2] Birmingham Business School, Department of Finance, University House, University of Birmingham, Edgbaston, Birmingham - B15 2TT - UK; e-mail: j.m.binner@bham.ac.uk

[3] College of Business and Economics, University of Wisconsin River Falls, 23D South Hall, Riverl Falls, WI 54022, United States; e-mail: logan.kelly@uwrf.edu

4 School of Management, Swansea University, Singleton Park, Swansea, SA2 8PP, Wales, UK; e-mail: S.M.Chaudhry@swansea.ac.uk

financial innovation within the endogenous money creation? Can the policy tools currently used by the Monetary Authorities capture the complexity of this relationship and the financial innovation-boosting role into the bank money/credit creation process adequately?

Review of the literature

Relevant scholars as Schumpeter, Keynes, Shackle and others guessed the central role of the bank money within the economic system. In particular, Schumpeter (Schumpeter, 1934) in his earlier studies put the financial system at the centre stage. He argues that innovation is founded on the creation of credit, and thus the importance of the financial system is crucial to facilitate the waves of innovation and, in turn, to stimulate growth. A large debate involves the New Growth Theory (NGT) (Romer, 1990; Grossman and Helpman, 1991; Aghion and Howit, 1998) and Evolutionary Theory (ET) (Nelson and Winter, 1982; Silverberg et al., 1998; Chiaramonte and Dosi, 1993) on this topic. We hold these two approaches as a basis for analyzing the relationship between finance and economic growth.

Research Objective

The financial system today is definable *Greedy*. It is characterized by financial trading activity, which has a strategic self-gain motivation. Currently, the financial market is characterized by complexity. It is a liquid market where supply and demand match automatically. The financial intermediary plays a role of insurance of the liquidity and earns money by managing the flow of investments. The technological revolution started in the 70s/80s of the last century is at the basis of this development.

The advanced financial system facilitates financial product differentiation (through financial engineering) making a deep market segmentation. A good financial innovation improves risk management and reduces transactions costs. In contrast, a bad financial innovation facilitates market segmentation and facilitating rent seeking speculator. Following the bad path the financial system, today, has put in place a discriminating monopoly where market power and political power are linked tightly. It uses this monopolistic position and its market/political power to increase selfgain and maximizes the economic rent. Then, it captures the consumer surplus. Through an accelerator effect, positive economic rent opportunities created by bad financial innovation, multi-leveraging, and ongoing segmentation, increase information asymmetries. This increases the possibility of defaults and the likelihood that a financial crisis become an economic crisis. In general terms, the theory developed implies that when the economy follows a so-called *virtuous cycle*, the presence of a highly-technological level of financial institutions operates beneficially with a high level of saving put into productive use in the economic system, and spurs a highly productive investments level and funding for innovation projects. A high-growth level result. However, the alternative perspective seems entail a *dis-virtuous cycle*, in which the financial state determines the growth path. As a result, the growth-finance relationship is inverted. In an economy where the financial institutions are "Greedy" currently exists a possibility to switch from a *virtuous cycle* to an anticompetitive *dis-virtuous cycle*. If the increasing political power of the financial markets (an externality of the evolution of the financial system) is not correctly managed the relationship will run in an opposite direction to the *virtuous cycle*, activating a wealth destroying cycle (*wealth trap*)[5] (Lauretta, E., 2014).

Research Strategy (Methodology)

The model thus has political economy dynamics with a non-linearity. At this stage, we analyse theoretically the dynamics of the two cycles separately and the flip from *virtuous* to *dis-virtuous cycle*, taking in consideration the balance sheet approach (see Bezemer, 2011; Cincotti et al., 2010) and then investigate the transition between them under the policy view.

A developed index (VSCs –Virtuous-Dis-virtuous Cycles- Index) provides the first empirical evidence of the switching from *virtuous* to *dis-virtuous cycle* and of the complex finance-growth relationship. This index incorporating the securitization mechanism is the first tool able to take a clear picture of the business cycle's status and it might be effectively used by the policy makers as a policy tool. A cross-country and a compositive leading indicator analyses for US, UK and UE economies is done in order to verify the validity of the index. In addition, using the KKV (Keating, Kelly and Valcarcel, 2014) model we investigate and collect some preliminary evidence of the reasons of the ineffectiveness of monetary policy applied (from the financial crisis till today).

This kind of analysis allows us to open an introductory policy discussion about how to restore the goodness of the cycle and prepare the ground for the second research step encompassing an Agent-Based study (Cincotti et al., 2010; Dosi et al., 2011; Delli Gatti et al., 2011) founded on the Cycles Theory developed.

Conclusions

The novelty of this research is the introduction of a theoretically sound foundation for the new established paradigm finance-growth (not the growth-finance one which is widely investigated) highlighting the alternative direction of the analysis, and develop a multi-agent analysis to understand the interactions between financial system, the real economy and indeed the polity.

[5] The wealth trap differs from the short term Keynesian "liquid trap". The latter is a consequence of the wealth trap.

The developed VDCs index is light in the shadow of the financial indices environment, given that till today do not exist a financial index to capture the financial innovation role within the finance-growth relationship. The policy discussion focuses its particular attention on the structural policies to prevent a *virtuous cycle* from becoming a dis-virtuous one, again.

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